

**CAUTION:** Observe proper safety and repair procedures for installation of all chassis parts. Some chassis parts require specialized tools and experience and therefore **MUST** be installed by a qualified technician otherwise an unsafe vehicle and/or personal injury could result. Wear safety glasses and other protection.

**WARNING:** Before beginning, check for any damaged or loose suspension connections. Loose connections here indicate worn or broken parts which **MUST BE REPLACED**. Failure to replace a damaged or worn spindle and/or link may cause the wheel to separate from the vehicle, possibly resulting in serious personal injury.

**NOTE:** These parts are intended for use in vehicles with abnormal alignment and are designed to replace the non-adjustable factory equipment. These parts are not designed for installation on vehicles with suspension and/or steering systems modified for racing, competition or any other non-standard purpose.

Before starting alignment, complete inspection checklist and determine the amount of change needed.

1. Match left and right hand threaded parts and assemble the SmartArms™. Thread the Jam Nuts all the way down on the End Links [left hand Jam Nut (silver) on the left hand threaded End Link (first thread missing), right hand Jam Nut (black) on the right hand threaded End Link (complete threads)]. Thread the End Links with the wider spacers into the shorter Adjusting Tube and thread the End Links with the shorter spacers into the longer Adjusting Tube (put the left hand Link into the end of the Adjusting Tube which has the radial groove next to the wrench flats).
2. Raise the rear of vehicle and support body safely on jack stands. Remove rear tire and wheel assembly.
3. Remove the bolt from the lower center link at the body mounting bracket. Remove the nut and bolt from the other end of the lower center link.
4. Using the new SmartArm™ unit with the wider bushing spacers, install one end into the body mounting bracket for the lower center link. Re-install the mounting bolt but do not tighten yet. Position the other end of the new SmartArm™ on the spindle and re-install the bolt and nut (do not tighten nut yet).
5. Remove the nut and cam bolt from the body mount of the lower rear link and the nut and washer from the other end of the lower rear link at the spindle.
6. Position the remaining new SmartArm™ unit (longer tube, shorter bushing spacers) onto the spindle mounting stud and re-install the washer (with the bevel facing away from the bushing) and the nut. Do not tighten the nut yet. Position the other end of the new SmartArm™ in the body mounting bracket and re-install the cam bolt, washer and nut with the cam adjustment in the neutral position (do not tighten nut yet).
7. Safely raise the spindle close to its normal ride position in the wheel well to properly set the rubber bushings (do not raise the body off the jack stands for safety).
8. Tighten the cam bolt and nut and torque to 40 ft-lbs (54 N-m). Tighten the three remaining connections to 43 ft-lbs (59 N-m).
9. Replace the tire and wheel assembly.
10. Adjust camber by loosening jam nuts and turning the Adjusting Tube of the center lower link close to the desired specifications. **DO NOT** extend the threads beyond their limits (ensure that the dimple marks on the End Link threads are still located within the Center Tube).
11. Adjust rear toe by loosening jam nuts and turning the Adjusting Tube of the lower rear link to the desired specifications. Note this will affect the camber reading previously set.
12. Re-adjust the center SmartArm™ to affect camber and the aft SmartArm™ to affect rear toe until both are within specifications.
13. Tighten the jam nuts against the Adjustment Tubes on both SmartArms™ to 80 ft. lbs. [108 N.M.] and road test vehicle.

## ALWAYS CHECK FOR SUSPENSION CLEARANCE

Modifying any suspension component may change other part clearances and cause binding or interferences. After installing any Ingalls' product, the suspension must be checked for binds or interference between all components, other arms and the chassis. Be sure that all control arms, struts and steering ends move freely through the full movement of the suspension (springs may need to be removed to fully check component travel). Installing any Ingalls' product on a modified vehicle (lowered or raised) from the original factory design requires a detailed check of all suspension components and their movements. Ingalls recommends that a trained technician install all products.

### Limited Warranty

Subject to Disclaimer. All Ingalls products are warranted against defects in materials and workmanship for ninety (90) days from date of purchase. During the warranty period, Ingalls will repair, or at its option replace at no charge, components that prove to be defective. The product must be returned, shipping prepaid, to Ingalls facility. This limited warranty does not apply if the product is damaged by accident or misuse. The foregoing warranty is in lieu of all other warranties expressed or implied including but not limited to any implied warranty of merchantability, fitness, or adequacy for any particular purpose or use. Ingalls shall not be liable for any special, incidental or consequential damages whether in contract, tort, or otherwise resulting from the use or the inability to use the product.

### Warranty Disclaimer

Use of this product in competition, or use on vehicles altered from original manufacturer's specifications or settings, **EXPRESSLY VOIDS WARRANTY**. The user is urged to inspect for suspension binding or interference when the product is used in these manners. However, due to the varying conditions and manner of use which the product will be subjected to in such uses, Ingalls Engineering Co., Inc. makes no warranties, either express or implied, including any warranty of merchantability or fitness for a particular purpose for use in competition or with specifications or settings other than those specified by the original manufacturer's specifications.

